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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/588,052 | 07/31/2006 | Do-Man Kim | 44352-0011-00-US | 9991 |
| 23973 | 7590 | 06/12/2008 | EXAMINER | |
| DRINKER BIDDLE & REATH | | | FRONDA, CHRISTIAN L | |
| ATTN: INTELLECTUAL PROPERTY GROUP | | | | |
| ONE LOGAN SQUARE | | | ART UNIT | PAPER NUMBER |
| 18TH AND CHERRY STREETS | | | | 1652 |
| PHILADELPHIA, PA 19103-6996 | | | | |
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| | | | 06/12/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/588,052 | KIM ET AL. | |
| | Examiner | Art Unit | |
| | CHRISTIAN L. FRONDA | 1652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 February 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) 5 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 July 2006 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/08, 5/08</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

1. Claims 1-10 as listed in claim set filed 02/25/2008 are pending and under consideration in this Office Action.
2. The objection to claims 1 and 2 for reciting the phrase “SEQ. ID. No have been withdrawn in view of applicants’ amendment to the claims filed 02/25/2008.
3. The rejection of claim 5 under 35 U.S.C. 112, second paragraph, as being indefinite has been withdrawn in view of applicants’ arguments filed 02/25/2008.
4. The rejection of claims 1 and 2 under 35 USC 101 has been withdrawn in view of applicants’ amendment and arguments filed 02/25/2008.
5. The rejection of claims 1-10 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement and written description requirements have been withdrawn in view of applicants’ amendment and arguments filed 02/25/2008.
6. The rejection of claims 1-4 and 6-10 rejected under 35 U.S.C. 102(b) as being anticipated by Steyn et al. (Gene. 1995 Dec 1;166(1):65-71) has been withdrawn in view of applicants’ amendment and arguments filed 02/25/2008.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 7-10 stand rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (US Patent 6,485,953, published 11/26/2002; reference of record). The reference teachings have been stated in the previous Office Action.

Applicants' arguments filed 02/25/2008 have been fully considered but are not persuasive for reasons of record as further explained below. The claims as amended do not recite specific limitation so pH optima, apparent molecular weight, and dependence on cations. Such limitations cannot be read into the claims to further limit the scope of the claims. Because the disclosed protein comprising an amino acid sequence of SEQ ID NO: 1 and the reference DXAMase are both obtained from the same source *Lipomyces starkeyi* KFCC-11077, have the same disclosed dextranase and amylase activities, and have about the same molecular weight; then in absence of facts to the contrary, the reference DXAMase inherently has the same amino acid sequence of SEQ ID NO: 1 and has the same activity as the claimed protein, such as hydrolyzing amylopectin, starch, glycogen, and amylase. Kim et al. teach that the DXAMase having a molecular weight of 60 kilo Daltons is obtained from *Lipomyces starkeyi* KFCC-11077 (*L. starkeyi* KSM 22) using gel permeation chromatography, where an eluted fraction containing citrate phosphate buffer solution and the DXAMase having dextranase and amylase activities was collected. Thus, the reference teaches the claimed invention.

Claim Rejections - 35 U.S.C. § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Patent 6,485,953, published 11/26/2002; reference of record) in view of Standing (Curr Opin Struct Biol. 2003 Oct;13(5):595-601; reference of record) and Sambrook et al. (Molecular cloning A Laboratory Manual, 2nd edition, Cold Spring Harbor, N.Y. 1989, pages 8.46-8.52 and pages 11.2-11.19; reference of record).

The rejection has been stated in the previous Office Action. Applicants' arguments filed 02/25/2008 have been fully considered but are not persuasive because since the protein of Kim and the claimed protein are the same for the reasons stated above for the rejection of claim 1 and 7-10 under 35 U.S.C. 102(b), then it would have been obvious to make the claimed polynucleotide.

11. Claims 3, 4, and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US Patent 6,485,953) in view of Standing and Sambrook et al. as applied to claim 2 above; and further in view of Guan et al. (US Patent 5,643,758, published 07/01/1997; reference of record).

The rejection has been stated in the previous Office Action. Applicants' arguments filed 02/25/2008 have been fully considered but are not persuasive because since the protein of Kim and the claimed protein are the same for the reasons stated above for the rejection of claim 1 and 7-10 under 35 U.S.C. 102(b), then it would have been obvious to make the claimed transformed cell and enzyme.

Conclusion

12. No claim is allowed.
13. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian L Fronda whose telephone number is (571)272-0929. The examiner can normally be reached Monday-Thursday and alternate Fridays between 9:00AM - 5:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nashaat Nashed can be reached on (571)272-0934. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christian L. Fronda/
Patent Examiner
Art Unit 1652